



VERNON LOG YARD REVIEW

**An Internal Ministry of Forests Review of the
Vernon Log Yard Operations 1996/97 – 1998/99**

Prepared
December 1999

FINAL REPORT



**Forest
Enterprises
Branch**

VERNON LOG YARD REVIEW

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EXECUTIVE SUMMARY**Reason for the Review**

The review of the Vernon Log Yard was launched in March 1999 to provide a tool for evaluating future proposals for new log yards in B.C. Small Business Forest Enterprise Program.. Staff reviewed and reported on the Vernon Log Yard's operations, processes, costs and revenues, profitability, markets and clients, and cut profile between 1996/97 and 1998/99.

Part of a Bigger Picture

The provincial government's long-term vision for diversifying and renewing the forest sector takes into account – and must find a balance among – an array of social and economic benefits for industry, workers, First Nations, and forest-dependent communities.

This review demonstrates that the Vernon Log Yard's profitability is most sensitive to market fluctuations and stumpage rates, among other factors. While the Yard has had profitable years, overall, it does not consistently generate substantial profits, or stimulate significant related economic activity. It does, however, create a number of important local and regional community/social benefits, such as improved service for small producers and value-added manufacturers, enhanced forest management, Forest district budget economies, and the inclusion of smaller logging contractors and First Nations in the forest economy.

Two Profitability Perspectives

Two profitability perspectives were used in this review – a business case and a government operations case – to clearly illustrate the difference between costs to government versus costs from the perspective of the private sector.

In the **business case**, stumpage was considered a cost of securing the rights to the timber sold by the Log Yard. All operational costs were recognized. An all-in overhead-planning rate, which reflected full cost-recovery, was used to show the potential profitability of an operation using a non-renewable forest license as its principle source of fibre. (The business case review was also extended, back to 1993/94, to illustrate a full business cycle.)

In the **government case**, stumpage was considered revenue, in the form of a flow-through to the Crown. A district planning cost estimate, including only direct staff and contract costs, was used to estimate the average planning costs.

Otherwise, the two perspectives shared all of the same assumptions.

The Log Yard

The Yard is in the Vernon Forest District, operating on a leased site. Three districts in the Kamloops Forest Region supply the Yard: Penticton, Salmon Arm and Vernon. Vernon supplies roughly 70% of the timber. The District Manager holds the timber sales and contracts directly with small logging companies to harvest and haul the timber to the yard.

Stumpage rates are calculated under the Comparative Value Pricing mechanism. Harvesting and hauling contracts are competitively bid and employ Section 20 registrants, including members of

the Okanagan Indian Band. The Log Yard sorts and merchandizes the logs, which are sold through sealed competitive bids. Pulpwood is not handled through the Yard.

The fibre quality from the Log Yard is consistently high: more than 90% of all fibre sold is sawlog, peeler, building log or oversize. That profile makes the Yard attractive to major licensees looking for incremental volumes.

Clients and Markets

- The Log Yard has a diverse customer base (e.g., small- to large-sized clients) that has grown by 22% since 1996/97. The overwhelming majority of customers are from the Kamloops Forest Region.
- Major licensees accounted for 74% to 81% of total sales between 1996/97 and 1998/99: Tolko Industries Ltd. was the single largest client during that period.
- Customer loyalty is strong, attributed in part to the customer-orientation of the staff, and their willingness to offer smaller sorts tailored to specific needs.
- Since approximately 83% of the Log Yard's sales are sawlogs and peelers, the geographic size of its market is driven by timber quality and lumber prices: the scope generally contracts when prices are low or average, and expands when prices rise enough to offset the cost of additional trucking.

The Business Case Results, 1996/97 to 1998/99

- Stumpage of \$4,733,650 was recorded and paid as a cost to the Log Yard.
- Revenues totalled \$12,796,052.
- The Yard lost money in two of three years when log prices were lower than average. Total losses were \$380,823.
- The average breakeven log price over the period was \$77.03/m³.

The Business Case Results, 1993/94 to 1998/99

- Stumpage of \$3,724,817 was recorded and paid as a cost to the Log Yard.
- Revenues totalled \$18,096,690.
- The Yard made money in four of its six years of operation. Total profits were \$4,919,815. More than 90% of the total profit was generated in the first two years of operation; 1995/96 was a watershed year for profit/loss.
- The average breakeven price of logs was \$72.24/m³ between 1993/94 and 1995/96. That average rose to \$77.03/m³ between 1996/97 and 1998/99. The six-year average price was \$74.64/m³.

The Government Operations Case Results, 1996/97 to 1998/99

- Stumpage of \$4,733,650 was considered a revenue flow-through to the Crown, rather than a cost to the Log Yard.
- Revenues totalled \$12,796,052.
- The Yard made a profit in all three years. Total profits were \$4,901,340.
- The average breakeven log price was \$74.81/m³.

Conclusions Common to by Both Cases

- Log Yard revenue is more closely related to the quality of its logs than to the number of sorts, since the market does not generally recognize sorting as additional value. Approximately 95% of total revenue at Vernon comes from the top 15 of approximately 40 sorts.
- Total revenue is closely related to the price of non-sawlog timber.
- In order to be profitable, the Log Yard must realize an average log price of approximately \$78.00/m³. In weak markets, the Yard must concentrate on selling the higher end of the log profile.
- The profitability of the Yard was directly influenced by stumpage pricing policy and fluctuations in the lumber markets. It was also sensitive to the impacts of the Canada - U.S. Softwood Lumber Agreement and the Forest Practices Code on major licensee demand for incremental wood and on stumpage and planning costs.
- In an appropriate area and under the right market conditions, a Log Yard can make money. However, introducing a new Yard into a region – particularly one with an average or below-average timber profile – will not necessarily result in profit or other economic development.

Log Yard Performance Review, 1996/97 to 1998/99

Based on its *1996 Strategic Plan*, the Yard has achieved five of its six strategic objectives over the past three years:

- Objective 1 – *Maximize the financial return to the Crown.*

Not fully achieved. In both the business and government cases, there were significant opportunity costs associated with sales through the Log Yard.

- Objective 2 – *Provide open market sales of logs.*

Fully achieved. Log Yard sales records clearly indicate a wide customer base.

- Objective 3 – *Provide a venue for small tenure-holders to sell/market logs.*

Fully achieved. The Log Yard sells small quantities of logs from woodlot holders and salvage operators.

- Objective 4 – *Develop harvest cost and log price information..*

Fully achieved.

- Objective 5 – *Provide opportunities for First Nations to participate in the forest industry.*

Fully achieved. A number of harvest and haul contracts have been awarded to the Okanagan Indian Band.

- Objective 6 – *Harvest the profile of the district.*

Fully achieved. Log Yard sales are recognized as just part of the overall five-year development plan.

Administrative Recommendations

The review makes the following recommendations to improve financial control and tracking of the Vernon Log Yard operations:

1. Log Yard accounting should be set up within the forest district office, as a separate entity, to clearly identify all costs associated with the Yard. That accounting should include indirect costs of the Log Yard, such as planning.
2. A complete financial report should be done for the Yard each fiscal year.
3. The objectives of the Yard should be reviewed, revised if appropriate, and confirmed by the Assistant Deputy Minister, Operations, every three years or as judged appropriate.
4. The Yard should explore the potential for cost recovery when it operates as a broker.
5. Use and dissemination of Yard sales and price data should be expanded. A summary report of findings should be made available on at least an annual basis.
6. Proposals for additional public-sector Log Yards should be evaluated on the basis of specific objectives: if that is revenue, senior management must decide whether or not stumpage would be incurred as a flow through. If revenue is not the objective, then a cost benefit analysis, including social objectives, must be completed.

INTRODUCTION

Project Overview

The ADM, Operations requested in March of 1999 a means to evaluate future proposals for new log yards. Small Business staff in Victoria were charged with conducting a review of the operations of the log yard that would include a detailed description of processes, analysis of costing and revenues, profitability, client service and Yard sales profile.

The Vernon Log Yard has been in operation since 1993. Since that time, there have been two reviews of the log yard operations, one completed in 1993/94 by ministry staff and one in May of 1995 by Price Waterhouse.

In December 1995 the Deputy Minister approved a briefing note from the Kamloops Region recommending the "project become a permanent aspect of the Vernon Forest District operations, moving from an experimental phase to an operational phase." The ADM, Operations concurred subject to submission of a strategic plan for the next 5 years, outlining strategies to deal with financial and volume commitments. The strategic plan was submitted to the ADM at the end of October 1996 outlining the objectives and the new strategic direction of the log yard and requesting additional budget, FTE's, and volume. While this plan was approved by the Regional Manager the additional resources were not provided to the log yard.

Summary information on the performance of the log yard is not available for the past four years. Several log yard proposals have come before the ministry and evaluation of these proposals has been completed on an ad hoc basis.

The review allows us the opportunity to evaluate the log yard over a market cycle, and facilitates a more objective analysis of the viability of any proposed future log yards. At inception of the Log Yard in 1993 the market was favourable. Since that time, the market has completed a full business cycle. In 1993 log markets were buoyant and prices were strong, in 1998 log markets had bottomed to decade lows followed by some recovery in early 1999.

REVIEW TERMS OF REFERENCE:

Objectives

1. To determine the characteristics of the Vernon Log Yard for use in evaluating future proposals for log yards in other geographic locations. These criteria will include:
 - Markets;
 - Cost structure;
 - Sources of fibre;
 - Revenues (by sort and category);
 - Scaling practices; and,
 - Selling practices (logs and timber).

2. To articulate specifically and clearly the model employed in the Vernon Log Yard so that comparisons to proposed models can be made on a consistent and fair basis.
3. Evaluate progress on recommendations made in the Price Waterhouse study of 1995 that suggested data collection and project cost tracking should be improved.

Data to be Reviewed

The log yard has been in operation since 1993 and the historical data on development and other costs and revenues will be evaluated over the lifetime of the project. This will assist us in determining the viability of the operation over the life of its business cycle.

Cost information required (for each fiscal year):

Log Yard Operations	Timber Sale Operations
Land and buildings	TSL development
Log yard staff and admin	TSL harvesting/transport
Scaling, sorting, merchandising	Basic silviculture
Advertising	Compliance & enforcement and admin
Equipment Costs	Deactivation
	Volumes harvested

Other data to be reviewed:

- Sales records for individual sorts (buyer, date, price, volume, grade, species);
- District and Log Yard organization charts;
- Indirect FTE costs;
- LOS/GL records for log yard accounts;
- Log yard contract records (contract summary cards); and,
- Annual average billed rate for section 20 sales in Vernon Salmon Arm and Penticton.

Outcomes

Report following on-site analysis of data will evaluate primary objectives as established in the Terms of Reference:

- Detailed description of fundamental structure of the operation which will facilitate future comparisons of proposed additional log yards.
- Cash flow analysis will evaluate financial viability of these operations over the entire life cycle of the project.
- Development of critical components of future business case analyses.
- Evaluation of progress made in financial control and tracking improvements as recommended by Price Waterhouse.
- Development of additional recommendations for improvement (and to be included in future projects) of administration and financial control.

Review Process

In July of 1999 small business staff visited the Vernon Forest District to conduct the review. Interviews were conducted with the Vernon District Manager, Operations Manager, Small Business Forester, Small Business Planning Officer, Log Sales Officer, Regional Small Business Coordinator, and the Small Business Foresters from Penticton and Salmon Arm. An on-site visit to the log yard and review of the available financial data were also part of the process.

This review is not a financial audit of the Log Yard operations and is based on records supplied by the Kamloops Region, Vernon, Salmon Arm and Penticton Forest Districts.

Report Perspectives

The review of the Vernon Log Yard will examine key characteristics the Log Yard's:

- Markets and client base;
- Operations; and,
- Profitability.

Two profitability perspectives will be utilized, a business-case analysis and governmental operations analysis. The two perspectives differ in terms of the nature of the assumptions surrounding cost recognition. All other client and market analysis factors, however, will remain the same.

Business-Case Analysis Assumptions:

- All operational costs are recognized;
- Stumpage is viewed as a cost of securing the rights to the timber sold by the Vernon Log Yard and is not a revenue to the Yard; and,
- An all-in overhead-planning rate based on Revenue Branch analysis of industry planning and overhead is used to estimate the costs of planning the sales. This all-in planning rate was employed to reflect a full cost recovery position of planning activity costs and allowed for an examination of the potential profitability of a private sector operation using a Non Renewable Forest License as its principle source of fibre.

Government-Operations Analysis Assumptions:

- Stumpage is viewed as part of the revenue of the Yard's operations and is therefore not seen as a cost of securing the rights to the timber sold by the Log Yard;
- A government planning cost estimate developed by the District was used to estimate the average planing costs over the period 1996/97 to 1998/99, which includes only direct staff and contract costs without an allowance for District overhead/depreciation.

Within these two main analytical perspectives the report will focus on a review of the most recent years of operation, covering the period 1996/97 to 1998/99. However, to enable an understanding of the profitability of the Yard, over the business cycle, a net-revenue analysis based on a business case perspective will undertaken, covering the period 1993/94 to 1998/99.

Report Structure

The structure of the report will be divided into 5 sections:

- Log Yard Operations;
- Business Case Analysis;
- Government Operation Review;
- Review of Log Yard Performance; and,
- Recommendations.

Section 1 - Log Yard Operations: outlines the evolving nature of the objectives of the Log Yard along with enumerating a series of social community benefits that flow out of the operation's activities.

Section 2 - The Business Case Analysis: develops insights into the operations of the Log Yard from the viewpoint of a stand-alone private sector enterprise. This section utilizes a full cost recovery based analysis of the operations and outlines critical components of the client, fibre and cost base of the Yard's operation over the period 1996/97 to 1998/99. To further help understand the profitability of a private sector operation over the period of the business cycle an historical review of profitability covering the period 1993/94 to 1998/99 was undertaken. The findings of this analysis will be the basis of the Recommendation section of the report.

Section 3 - The Government Operation Review section examines the profitability of the Log Yard from the standpoint of a government operation. Stumpage is viewed as a revenue flow-through to the Crown as opposed to an input cost of securing the logs that the Yard sells.

Section 4 - Review of Log Yard Performance: evaluates the operational success of the Log Yard in meeting the goals and objectives established in the 1996/97 Strategic Plan. The performance review will be carried out using both a business-case and a government operations analysis basis over the period 1996/97 to 1998/99. The review is limited to the 1996/97 to 1998/99 period in order to correspond with the introduction of the 1996/97 Strategic Plan.

Section 5 - Recommendations: outlines a basic analytical package of indicators that will assist Executive in the review of future log yard proposals along with providing a series of operational recommendations that will assist the Log Yard to address current issues and meet future challenges.

SECTION 1 - LOG YARD OPERATIONS

Objectives

In 1993 the objectives of the log yard were articulated in a Treasury Board submission as:

1. Increase the variety of alternative silvicultural systems and commercial thinning used throughout the province.
2. Try alternative ways of selling logs.
3. Examine the financial viability of the first two objectives.

The 1996 Strategic Plan objectives, approved by the Regional Manager, are:

1. Maximizing net financial return to the Crown from the forest resource by sorting and selling logs;
2. Providing open market purchases of logs available for the primary and secondary manufacturing industries within the province;
3. Providing opportunity for small operator tenure holders to market logs through a government log sort yard facility;
4. Providing an opportunity to collect information related to logging costs for alternative silviculture systems for determining appraisal allowances and to collect information related to selling a variety of log grades through a variety of market cycles that may lead to development of Forest Service policy;
5. Providing an opportunity for participation in the forest industry by First Nations; and
6. Harvesting a profile of stands equal to the district SBFEP - many of which will be through alternative silviculture systems. Adaptive or alternative forest harvesting practices will be promoted and implemented but situations, such as forest health issues, may preclude these practices.

Since 1996 the objectives have continued to evolve. The Vernon District Manager indicated that the economic objectives were no longer paramount that the increased variety of silvicultural and thinning systems had become standard operating procedure across the province and objectives other than profitability were a higher priority. The following list identifies a number of intangible benefits the log yard provides as determined by the District¹.

Social/Community Benefits

Vernon District staff have enumerated a number of positive social/community benefits that accrue to the District through the operation of the Log Yard

¹ The order in the list of the intangible benefits does not reflect ranking of its importance.

1) CLIENT SERVICE:

Allows the District to provide minor volumes of logs on a direct award basis to small sawmills or log homebuilders to enable these individuals to "complete an order on time." Allows small-scale salvagers and Wood Lot (WL) licensees an alternate opportunity to market their logs. It also provides a market for smaller sized customers to select and purchase logs that meets their specific needs --guitars, saddles, ornamental arches, etc

2) FOREST MANAGEMENT

Enabled the Vernon Forest District (VFD) to exercise greater control over sensitive site logging and employ sophisticated salvage techniques by utilizing harvest agreements rather than TSLs. Operation of the Yard has enabled VFD to carry out expensive beetle helicopter logging for "bigger picture" benefits. It has also allowed the VFD to experiment with new approaches respecting harvest methods and silvicultural systems

3) FINANCIAL

Has allowed VFD to maximize engineering and recreation budget by providing stringers, decking, and timbers at a considerable cost savings. The Yard has provided considerable flexibility to VFD and greater revenues to the Crown when salvaging fire guard wood or disposing of logs from seizures or trespass. Sales and operations data from the Yard assists the Forest Service in ascertaining the true cost of contract and right of way logging. The data can also be used to help calibrate and review the appraisal system's measure of the true market value of logs and actual expected revenue to the Crown versus current bidding on tendered TSLs.

4) SOCIAL

Operation of the Yard has enabled the VFD to enter into direct harvesting agreements with the Okanagan Indian Band to fulfill the commitment of the Minister respecting increased economic activity for local First Nations. This activity has resulted in approximately 8 local full time jobs and has provided a steady source of fiber for many small local value added enterprises. Through its harvest and haul contracts the yard, provides an opportunity to support smaller logging contractors in the region.

SECTION 2 - BUSINESS CASE ANALYSIS

The following section develops a business-case review of the Vernon Log Yard. The analysis examines characteristics of the clients served by the Log Yard, key operational procedures and focuses on the financial performance of the operations over fiscal years 1996/97 to 1998/99.

The focus of the analysis will be to review the operation of the Log Yard from the perspective of a private sector business. The analysis will assume full cost recovery and view stumpage as a cost of securing the harvesting rights to the timber sold by the yard. An all-in overhead-planning rate based on Revenue Branch analysis of industry planning and overhead is used to estimate the costs of planning the sales and will provide insights into the potential use of a Non Renewable Forest License (NRFL) to supply fibre for a private sector operation.

This baseline information will assist the Ministry in reviewing proposals submitted for development of other log sort facilities through out the Province.

CLIENT PROFILE

Data presented in Table 1 (found on the following page) illustrates a number of interesting features of the Log Yard client base. Table 1 identifies the twenty largest clients of the Vernon Log Yard, as measured by sales volume and value of sales over the period 1996/97 to 1998/99. From the table we can see that the Log Yard has a diverse and varying client base. These clients range from Major licensees and medium-size independent milling operations to small-independent operators.

The data further indicates that the client base has been growing, increasing from 46 in 1996/97 to 56 in 1998/99, although the expansion began to moderate in the last two years increasing by only one new client. This represents a 22% increase in the number of clients over the three-year period. The slowing in the growth of the number of clients between 1997/98 and 1998/99 likely reflects the dramatic increase in the proportion of sales purchased by Major licensees over the same period and the fact that the smaller sized customer base has been fully developed.

Customer Base Dominated by Regional Clients

The overwhelming majority of the Log Yard's clients are from within the Kamloops region, although the Yard regularly sells smaller volumes to customers located throughout BC.

From Table 1 we can also see a strong regional character to the client base. The Log Yard's principle clients are generally from within the Kamloops region, although the Yard also regularly makes sales to customers outside the region. This is due to the relationship between the value of the timber and the cost of trucking. The more unique and valuable the logs are the greater the distance that they can be trucked.

The characteristics of the logs received by the yard play a significant role in determining the scope of the client catchment. The large portion of sawlogs (over 60% of sales) in the Yard's sale profile suggests that the overall scope of the client base will be restricted to clients operating within a modest trucking distance during periods of low to average lumber prices. As the price of lumber increases the geographic scope of the client base may increase as the greater value of the products allows for additional trucking costs to be absorbed. The data therefore suggests that the proximity of a reliable customer base may play an important role in the overall viability of the Yard particularly when sawlog and less valuable logs dominate the sales profile.

Timber Quality and Lumber Price Determines the Geographic Scope of Client Base

When sawlog and less valuable logs dominate the sales profile the viability of a log yard is closely related to the proximity of a reliable customer base. Transportation costs will restrict the overall client catchment when the timber quality is of average and lower quality in periods of moderate lumber prices.

Table 1
Vernon Log Yard Principle Clients Fiscal Years 1996/97 to 1998/99
 (Source: Vernon Log Yard Sales Reports)

1996 - 1997: 20 Largest Clients				1997 - 1998: 20 Largest Clients				1998 - 1999: 20 Largest Clients			
Company	Volume	Revenue	Category	Company	Volume	Revenue	Category	Company	Volume	Revenue	Category
North Enderby Timber	0.6%	0.7%	I	527748 B.C. Ltd.	0.4%	0.6%	I	Paragon Ventures	0.5%	0.7%	I
Luigi Russo	0.6%	0.8%	I	Lakeside Timber Ltd.	0.4%	0.6%	I	Oyama Forest Products	0.5%	0.5%	I
B.J. Carney & Company	0.6%	0.8%	M	Kalensnikoff Timber Holdings	0.4%	0.6%	M	Mauzer Construction	0.5%	0.9%	I
Unique Timber Corp	0.8%	1.4%	I	DNT Trading Ltd.	0.5%	0.9%	I	Marwel Contracting	0.7%	0.9%	I
Matty Bros. 1980 Ltd.	0.8%	0.9%	I	Milestone	0.5%	0.7%	I	Gilbert Smith Forest Products	0.7%	0.8%	I
GFP Enterprises Ltd.	0.9%	0.6%	I	Oyama Forest Products	0.6%	0.5%	I	Weyerhaeuser Canada	0.8%	1.2%	M
Evans Forest Products	1.0%	1.1%	M	Custom Cut Log & Lumber	0.6%	1.0%	I	Chena Holdings	0.9%	1.0%	I
Steve Miller	1.1%	1.5%	I	Len Thiessen	0.7%	0.7%	I	Ideal Export Log Homes	1.0%	2.1%	I
Canada Japan Chopstick	1.2%	1.8%	I	Rouck Bros. Sawmill Ltd.	1.1%	2.0%	I	North Enderby Timber	1.4%	1.6%	I
Milestone	1.3%	1.9%	I	Federated Co-operatives	1.2%	0.8%	M	Denis Dufréne	1.5%	0.3%	I
Chaput	1.5%	0.8%	I	Canada Japan Chopstick	1.3%	2.2%	I	Federated Co-operatives	1.7%	2.0%	M
Len Thiessen	2.8%	2.8%	I	Chena Holdings Ltd.	1.5%	2.4%	I	Rouck Bros. Sawmill Ltd.	1.7%	2.9%	I
Gorman	3.5%	4.2%	M	Weyerhaeuser Canada	2.3%	2.1%	M	Poplar Creek Sawmills	1.8%	1.9%	I
Riverside	3.6%	3.9%	M	North Enderby Timber	3.1%	4.7%	I	Kalensnikoff Timber Holdings	1.8%	2.3%	M
Swan Lake Log Sort	5.0%	5.1%	I	Poplar Creek Sawmills	4.6%	5.3%	I	Hewat Holdings Ltd.	1.9%	1.8%	I
Poplar Creek Sawmills	5.4%	5.0%	I	Gorman Bros. Lumber	5.1%	6.0%	M	Gorman Bros. Lumber	2.7%	3.8%	M
Cordus Enterprises	5.7%	6.9%	I	Swan Lake Log Sort	5.8%	6.5%	I	Swan Lake Log Sort	2.8%	3.5%	I
Weyco	6.1%	6.2%	I	Riverside Forest Products	10.7%	9.7%	M	Evans Forest Products	3.5%	3.9%	M
Dunlop Ranch	7.0%	5.9%	I	Dunlop Ranch Ltd.	11.9%	9.1%	I	Riverside Forest Products	32.6%	29.9%	M
Tolko	46.2%	42.2%	M	Tolko Industries Ltd.	43.1%	38.9%	M	Tolko Industries Ltd.	37.4%	34.1%	M
Total	98.2%	95.2%		Total	95.9%	95.3%		Total	96.5%	96.0%	
Total Number of Clients (#)	46			Total Number of Clients (#)	55			Total Number of Clients (#)	56		
Majors as % of Top 20 Sales	55.0%			Majors as % of Top 20 Sales	62.8%			Majors as % of Top 20 Sales	80.5%		
Majors as % of Total Sales	55.7%			Majors as % of Total Sales	63.2%			Majors as % of Total Sales	80.5%		

Note *: I = Independent
 M = Major Licensee

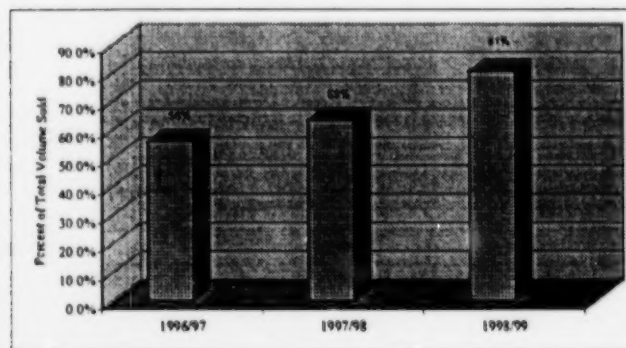
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Shift in Customer Base towards Larger Clients

Major Licensees represent the largest customers of the Log Yard accounting for 81% of total volume sold in 1998/99, a 25% increase over their proportion of sales in 1996/97.

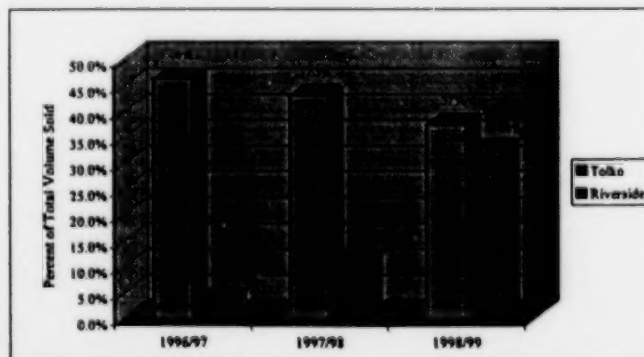
The growth in the proportion of total sales purchased by Major licensees is seen in Figure 1 below. From the figure we see that the proportion of total sales purchased by Major licensees has increased steadily from 56% in 1996/97 to 81% in 1998/99.

Figure 1
The Proportion of Log Yard Sales Purchased by Major Licensees
(1996/97 – 1998/99)



Tolko Industries has been the largest customer of the Log Yard for the past three years although its share of total sales has declined from 46% in 1997/98 to 37% in 1998/99. From Figure 2 below we see that the reduction in Tolko's share has coincided with a steady increase in the share of purchases made by Riverside Forest Products.

Figure 2
Tolko Industries and Riverside Forest Products Proportion of Sales
(1996/97 – 1998/99)

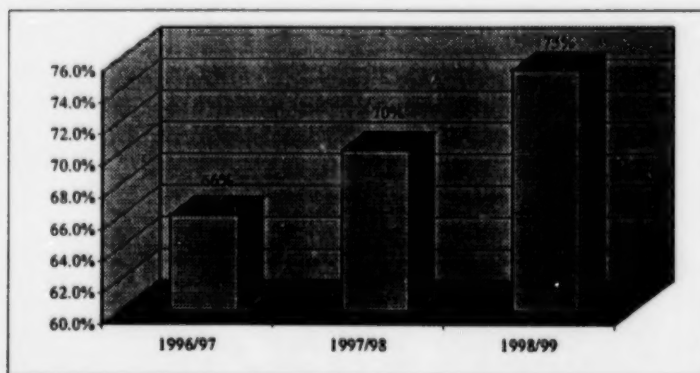


Riverside's strong increase in purchases has been the main driver behind the increasing proportion of sales to Major licensees. From Table 1 we see that over the period 1996/97 to 1997/98 Riverside's purchases increased from 4% to 11% as the share of sales to independents declined by 7%. Similarly in 1998/99 as the proportion of sales made to Riverside increased from 11% to 33% the proportion of sales to independents declined by 17%. This suggests that Riverside's increase in purchases absorbed significant volumes that previously had been purchased by independent customers.

The shift in the focus of the Log Yard's client base is also seen in the fact that in 1996/97 one out of the top five customers, as measured by sales volume, was a Major licensee. This increased to three of the top five customers in 1997/98 and to four of the top five in 1998/99 being Major licensees.

The trend towards larger clients purchasing greater volumes from the yard has also impacted on the nature of the Log Yard's revenue stream. From Figure 3 we see that the share of total sales revenue generated by the top five customers has increased from 66% in 1996/97 to 75% in 1998/99 although accounting for 81% of sales volume in 1998/99. This suggests that the average sale price of sorts sold to Major licensees (who now dominate the top 5 customers) is less than the overall average for the log yard in general. A possible explanation is that sawlogs represent a significant portion of the sorts purchased by the Major licensees and that the price of sawlogs is less than the average price of logs sold from the yard.

Figure 3
Revenue from the Largest Five Log Yard Customers
(1996/97 – 1998/99)



Strong Client Satisfaction

The Log Yard has a high number of repeat customers reflecting strong customer satisfaction. Client satisfaction also appears to have played an important role in the growth in the number of smaller clients.

Another important feature of the client base of the Log Yard is the high number of repeat customers the yard has had over the past three years. The data also suggests that the trend for

repeat purchase applies to both large and small clients alike. As noted earlier Tolko Industries has consistently been the largest single customer of the Log Yard for the past three years. However, smaller customers such as Denis Defresne have also purchased logs in each of the past three years.

The large number of customers returning to purchase logs year after year indicates that the Log Yard is able to satisfy the needs of its clients on a consistent basis. This customer loyalty likely reflects excellent staff service and the Log Yard's ability to deliver a relatively uniform species grade sort at regular auction times during the year.

Client satisfaction has also played an important role in the growth in the number of small independent clients. The customer orientation of the staff, along with a willingness to offer smaller sorts that are tailored to meet specific customer needs, has generated strong smaller-customer loyalty to the Log Yard. The staff of the Log Yard has been able to generate an environment that is welcoming to the smaller client. These customers are typically small builders and manufacturers who are more accustomed to buying finished wood products at the local hardware or lumber wholesaler.

Significant Client Characteristics

- The Log Yard has a diverse client base made up of large medium and smaller size buyers;
- Larger clients tend to dominate purchases;
- The top five buyers account for between two thirds and three quarters of volume sold;
- Customers are loyal and typically have purchased logs for the Log Yard before;
- The largest single customer (Tolko Enterprises) has accounted for over one third of all sales in the last three years;
- Major licensees play a significant role in the sales of the yard accounting of 81% of sales in 1998/99;
- The Log Yard staff has been able to attract a large number of smaller-clients by tailoring a number of sorts to meet the needs of smaller clients; and
- The lower the overall value/quality of the sales profile the more important it is to have a geographically close reliable client base. This is because of the inverse relationship between log quality/price and the distance that the logs can be economically shipped.

OPERATIONAL FACTORS

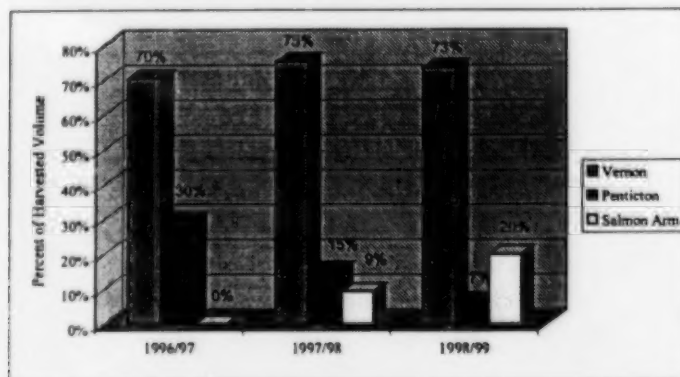
Sources of Fibre

The Log Yard obtains its fibre from timber sales harvested in the Vernon, Salmon Arm and Penticton Forest Districts. Figure 4 indicates that the Vernon Forest District has been the principal source of fibre for the Log yard over the period 1996/97 to 1998/99.

Over the three-year period 1996/97 to 1998/99 the Vernon Forest District has supplied over 70% of the fibre sold out of the Log Yard. Small volumes of fibre purchased from Woodlots and obtained from other sources such as small scale salvage are also sold from the Log Yard however

these additional sources make up only a small fraction of the yards total sales volume and therefore will not be included in the analysis.

Figure 4
Principal Sources Log Yard Fibre 1996/97 – 1998/99



The timber sales identified for harvest for the Log Yard are part of each District's normal five year planning process. No additional costs are incurred in preparing the sales for the Log Yard. All planning, road development, and silvicultural prescription activities are the same as those undertaken for any Small Business Forest Enterprise Program sale. This suggests that the knowledge of operations gained from the operation of the Log Yard can be used in evaluating other log yard proposals.

Harvest and Haul Contracts

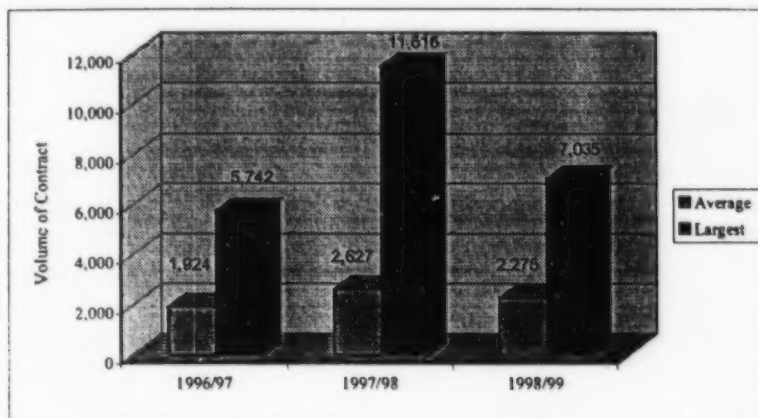
Contractors carry out all harvesting and hauling activities for Log Yard timber sales. All harvest and haul contracts are awarded following Ministry of Forests contract tendering policy. When ever possible harvest and haul contracts are awarded on a competitive basis, however, in some cases, due to the proximity of a contractor to the proposed timber sale or for reasons arising out of forest health concerns (beetles), contracts are direct awarded. All harvest and haul contractors are Section 20 registrants.

Harvest and Haul Contracts

The Districts use contractors to harvest and haul the fibre cut from the sales assigned to the Log Yard, Ministry staff's role is limited to monitoring.

Over the period 1996/97 to 1998/99 between 21 and 30 harvest and haul contracts were issued annually in total by the Districts to harvest the logs from the timber sales directed to the Log Yard. Figure 5 below presents the average and largest volumes of the harvest and haul contracts from 1996/97 to 1998/99.

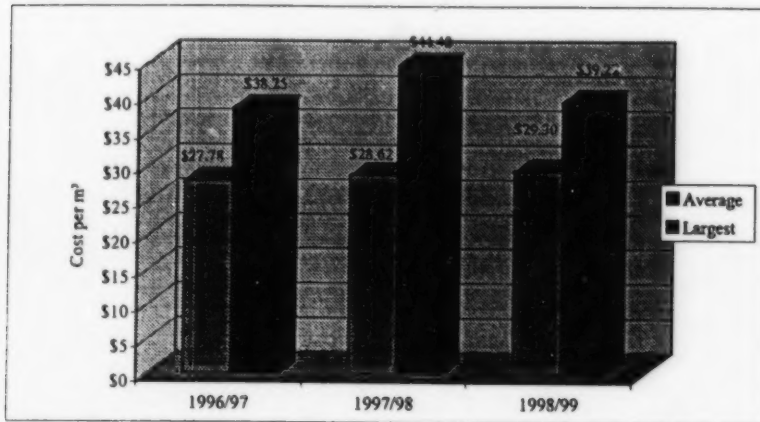
Figure 5
Average Volume of the Log Yard Harvest and Haul Contract 1996/97 – 1998/99



From Figure 5 above we can see that the average volume of the harvest and haul contracts was approximately 2,300 m³ with the largest contract set at just over 11,500 m³. The Districts for the most part have tried to limit the size of the harvest and haul contract volumes to levels that will permit medium and smaller scale operators to bid competitively on tendered contracts. The Vernon Forest District has also provided contract opportunities to the Okanagan Indian Band in the last two years.

The value of each contract varies with the nature of the harvest technique and the characteristics of operational terrain involved. Figure 6 presents the average and largest harvest and haul contract values for the period 1996/97 to 1998/99.

Figure 6
Average Harvest and Haul Contract Cost 1996/97 to 1998/99



From Figure 6 above we can see that the harvest and haul contracts experienced a modest upward trend in the average per cubic meter cost, increasing approximately 5% over the three-year period. These generally stable costs reflect the relatively consistent nature of the operational conditions of the sales and the benign inflation experienced over the period.

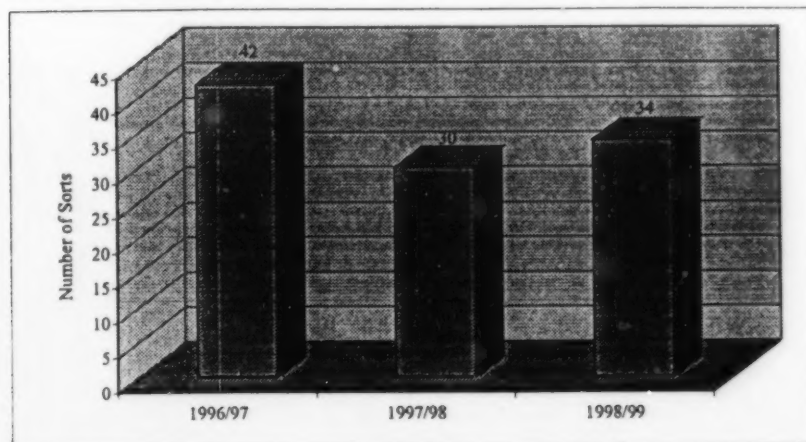
Log Characteristics

Once the yard receives delivery of the logs they are unloaded and arranged in rows so that all the log butts and tops are facing in the same direction in order to facilitate the grading, merchandizing and sorting process. The logs are piece scaled and sorted in one operation, in order to reduce the handling operations. On the basis of species and specific sales attributes such as top diameter, taper, knot characteristics, butt flare and other factors scalers establish the merchandizing cuts to maximize the value of the logs and to fill specific order requests. Each day the scalers meet with the log yard manager to discuss the market values and sales activity to ensure the highest yields are obtained from the logs while still being able to satisfying their clients.

The volumes species and grades associated with each sort obtained from the merchandizing of the logs is recorded in hand held scaling computers. As a safeguard against computer failure the logs from each load are not placed in the bins until the hand-held computers are downloaded and a hard copy is printed.

Figure 7 presents the number of sorts undertaken by the Log yard in a given year over the period 1996/97 to 1998/99. From the figure we can see that the number of sorts in each year has varied significantly over the period.

Figure 7
Number of Log Sorts Undertaken 1996/97 to 1998/99



The number of sorts undertaken is based on the character of the fibre that arrives in the Log Yard in relation to how it will best meet the general fibre requirements of the Log Yard's principal customers, and other custom fibre requests made by smaller-customers. From Table 2, which lists the sales volumes and revenue of the Log Yard over the over the period 1996/97 to 1998/99, there is little correlation between the number of sorts to sales volume, total revenue or average sale value.

Table 2
Log Yard Sales and Revenue 1996/97 to 1998/99

(Source: Vernon District Log Yard Sales Data)

Year	Sales Revenue (S's)	Sales Volume (m ³)	Number of Sorts (#)	Average Sale Value (S's/m ³)
1996/97	\$4,177,108	55,207	42	\$75.66
1997/98	\$4,624,111	58,124	30	\$79.56
1998/99	\$3,994,833	57,720	34	\$69.21

In order to evaluate whether the quality of fibre played a significant role in determining the number of sorts, the percentage of six key categories of the Log Yard's sorts has been calculated. The six general categories selected are:

- Sawlog;
- Peeler;
- Building Log;
- Oversize;
- Other (i.e., Character); and,
- Cedar.

The quality test for the three years 1996/97 to 1998/99 is presented in Figure 8 below.

Figure 8
Proportion of Key Sort Categories 1996/97 to 1998/99

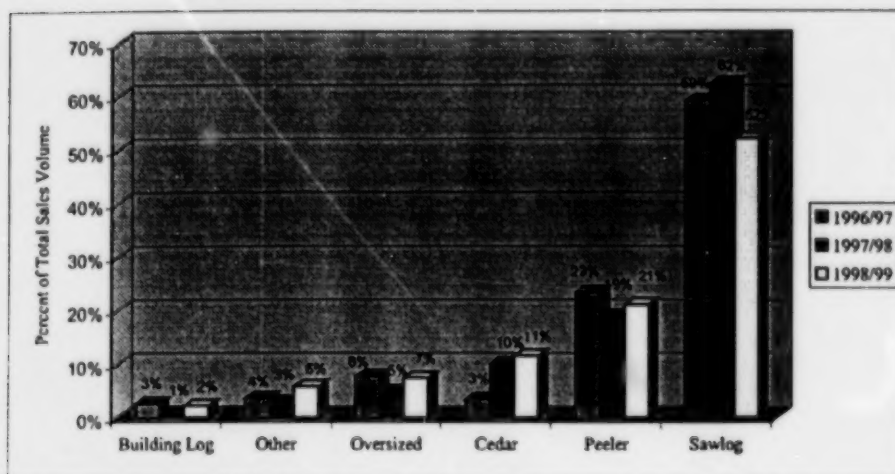


Figure 8 indicates that over 90% of all timber sold fell into categories, which can be viewed as being higher grade. The remaining volume is made up of specialty sorts and character logs (i.e., Other). The larger proportion of sawlogs found in 1997/98 and the lower portion of peeler grade, oversize and building log, may explain in part the fewer number of sorts undertaken in that year. The dominance of sawlog grades meant that there were fewer character and specialty logs available to make up the other sorts.

The Number of Sorts is not Directly Related to Increasing Revenue

There appears to be little correlation between the number of sorts undertaken and the overall revenue generated by the Log Yard. The trade-off between small client satisfaction and overall profitability must be carefully watched.

Further evidence of the lack of a relationship between the number of sorts and the gross revenue generated by the Log Yard is seen in Table 3 below. Table 3 presents data relating the contribution of the largest sorts as measured by volume and their contribution to Log Yard gross revenue.

Table 3
The Contribution to Gross Revenue of Sorts 1996/97 to 1998/99

	1996/97	1997/98	1998/99
Top 5 Sorts by Volume - Percent of Gross Revenue	68%	75%	66%
Top 10 Sorts by Volume - Percent of Gross Revenue	85%	92%	85%
Top 15 Sorts by Volume - Percent of Gross Revenue	90%	97%	95%
Total number of sorts	42	30	34

In Table 3 we see that by the fifteenth sort, over 90% of the gross revenue of the Log Yard is generally achieved. The remaining 15 to 27 sorts contribute between 10% and 3% of gross sales revenue in any given year over the period. This suggests that there is limited revenue accruing to the yard by extending its number of sorts past fifteen.

The data also indicates that the decision with respect to the number of sorts to be undertaken should be evaluated on a full-in cost basis. In cases where revenue is the primary goal, the decision to undertake a given sort should be based on an evaluation of whether or not the revenue from the sort is greater than the total costs incurred to provide it. In order to do this, some form of cost analysis (i.e., average sort cost) should be undertaken to establish a breakeven price for the sort.

From Figure 8 above we can see that over 90% of all volume sold through the Log Yard is either in the form of a sawlog, a building log, a peeler or an oversize log. Pulpwood is not directly sold through the yard.

Pulp Wood is not Sold Through the Yard

The Log Yard avoids handling pulp logs. Arrangements are made with their logging contractors to haul all pulp logs directly to chipping facilities from the logging site landings without going through the Yard.

In order to avoid unnecessary handling costs of bringing pulpwood to the yard, the Yard Manager has made arrangements with their logging contractors to directly haul all pulp logs to chipping facilities. The arrangements involve the use of direct cash sales made at the harvesting landings for pulp logs.

When sufficient volumes of pulp logs have been harvested and decked at the harvest landings, direct sales are made to the harvesting contractor for the pulpwood. The pulpwood is given a direct award mark and is hauled to chippers operated by Riverside or to Cache Creek. As a result the pulpwood is not recorded under the Log Yard's marks and any profit or loss arising out of the sale of the pulpwood is the responsibility of the logging contractor and not the Log Yard.

The consistently large proportion of sawlogs and peelers in the total volume of the Log Yard has made the yard attractive to Major licensees as a source of supply of incremental volumes for their operations. This may in part explain the recent shift in the Log Yard's client base towards Major licensees. It is the consistency and quality of the logs as well as the volumes, that makes the Log Yard attractive for the Majors.

Consistent Log Profile Makes Yard Attractive to Majors

The consistently large proportion of sawlogs and peelers sold by the Log Yard has attracted Major licensees.

Significant Operational Characteristics

- Consistent fibre profile makes the Log Yard a desirable supply source for Major licensees.
- The number of log sorts is not directly linked to profitability.
- The number of sorts offered should be carefully evaluated to avoid undertaking non-profitable sorts.
- Pulpwood is not handled through the Yard. Direct sale contracts are used to avoid additional handling costs and have the pulpwood directly hauled to chipping facilities.
- Contractors are used to harvest and haul fibre to the Yard.
- Because the Log Yard's fibre base is secured from timber sales the experience gained in the operation and performance of the Vernon Log Yard can be used in evaluating future log yard proposals that may involve the use of SBFEP timber sales as sources of fibre.
- The overall fibre quality is consistently high, with well over 90% of all fibre sold falling into one of the following general categories: sawlog, peeler, building log or oversize.

FINANCIAL PERFORMANCE

Cost Analysis

The basic costs of the Log Yard can be associated with the following activities:

1. Log Yard Operation:
 - Log Yard Operation Service Contract
 - Contract Harvesting Supervisor/Safety Monitor
 - Contract Scalers (2 to 3 scalers)
 - Contract Clerical and Buckerman
 - Log Yard Operational Expenses
 - Log Yard Lease
 - Ministry Staff Costs (1.75 FTE's)
2. Harvest and Haul contracts
3. Stumpage Paid
4. Advertising
5. Timber Sale Planning and Administration Costs

Log Yard Operation

Over the period 1993/94 to June 30, 1997 the Vernon Log Yard operated out of a facility located in the Village of Lumby. Following the termination of the original lease agreement in June of 1997 the Log Yard moved its site of operations to new facilities located on the Coldstream Ranch on Highway 6. The decision to move to the Coldstream location was based on a number of factors including:

- Termination of lease;
- Escalating operational costs;

- Escalating lease costs;
- Higher hauling costs to Lumby site;
- Concerns over Lumby site contamination; and,
- Poor drainage at Lumby location.

As a result of these concerns the Ministry of Forests Property Services Section undertook a search for a new location. After an extensive search the opportunity to relocate to the Coldstream Ranch location was identified. Analysis indicated that there were a number of significant advantages to the Coldstream Ranch site, which included:

- Lower leasing costs;
- Improved access;
- Lower hauling costs;
- Excellent site drainage; and,
- Opportunity to enter into a long-term lease arrangement.

As a result the Vernon Log Yard initiated the process to move its operations to the Coldstream Ranch. An initial two-year lease was signed on May 23, 1997 effective from June 1, 1997 to May 31, 1999 for \$50,000 per year. A further two-year extension of the lease was recently signed and covers operation of the facility at the Coldstream location until May 31 2001 at a cost of \$50,000 per year. The Property Services Section has applied to obtain permission to have the operation of the Log Yard classified as a permitted use activity in the Agricultural Land Reserve. It is hoped that this classification will be forth coming and operation of the facility will remain at this location.

A new volume based operations contract with the Balcaen Group was signed for \$6.21/m³. The contract with the Balcaen Group covers the basic day to day yard operations including supplying the front-end loader and operators. The new contract represents a **substantial operational cost saving** over the previous two years contract rates. In 1996/97 the operations contract rate was \$6.90/m³ and in 1997/98 the contract was for \$6.99/m³.

A summary of the annual Log Yard operational costs for the three-year period 1996/97 to 1998/99 is presented below. Figures were not readily available for years prior to 1996/97.

Log Yard Operational Costs 1996/97 – 1998/99

	1996/97	1997/98	1998/99
Log Yard Operations Costs:			
Log Yard Operation/ Service Contract	\$381,103	\$406,085	\$358,222
Contract Harvesting Supervisor/ Safety Monitor/	\$46,200	\$50,360	\$41,965
Contract Scalars (two to three scalars)	\$55,570	\$51,521	\$56,959
Contract Clerical + Other Support ie bucking	\$22,620	\$36,227	\$33,238
Log Yard Operational Expenses	\$47,003	\$29,565	\$31,754
Log Yard Lease	\$82,884	\$72,987	**\$50,000
Total Operational Costs	\$635,380	\$646,745	\$572,138

Notes** The lease payment for 1998/99 of \$50,000 was paid by Resource Tenures Engineering Branch

Ministry staff costs are based on the assumption of 1.75 FTE's of Ministry of Forests staff effort being directed towards Log Yard activities on an annual basis. This includes District staff involved in the operation of the log yard directly and incremental planning and development staff time incurred by the District along with supervision cost estimates supplied by Penticton Forest District. The staff costs include a 21.7% benefit cost. Staff costs estimates are presented below:

Ministry Staff Costs Associated with Operation of the Log Yard 1996/97 – 1998/99

	FTE	Number	1996 Total	1997 Total	1998 Total
Log Yard Manager	1	1	\$61,405	\$62,020	\$62,020
Log Yard Clerk	0.5	1	\$19,943	\$20,143	\$20,143
Accounts Clerk	0.25	1	\$9,971	\$10,071	\$10,071
			\$91,319	\$92,234	\$92,234
Penticton Harvest Supervision			\$42,105	\$25,759	\$8,153
Total MoF Staff Costs			\$133,424	\$117,993	\$100,387

Timber Sale Planning/Administration Cost Charges

The District Manager in each District supplying volume to the Log Yard is the licensee of record. The sales are priced under the Comparative Value Pricing mechanism, and therefore can be charged levies for planning, development and silviculture in order to recover the costs of these Ministry activities and expenditures.

In discussions with the Kamloops Region it was determined that levies were routinely charged for development and silviculture on Log Yard sales, however, planning and general timber sale administration costs were not recovered. Therefore, in order to fully recognize these costs in the Log Yard timber sales an \$8.10 levy adjusted for inflation and scaling costs² was applied. The \$8.10 charge represents the rate utilized by Revenue Branch to account for planning costs in the Vernon District in their calculation of the CVP rate for typical SBFEP sales.

² The Revenue Branch planning and administration costs include an allowance for scaling, therefore the actual scaling costs of the Log Yard was deducted from the planning cost charges of the Yard in each year to remove double counting of the scaling charges.

Revenue

The gross revenue of the Log Yard for the period 1996/97 to 1998/99 is presented below

Log Yard Gross Revenue 196/97 – 1998/99

	1996/97	1997/98	1998/99
Harvested Volumes Scaled and Sold (m ³)	55,207	58,124	57,720
Average Log Price	\$75.66	\$79.56	\$69.21
Total Sales Revenue	\$4,177,108	\$4,624,111	\$3,994,833

Revenue is based on sales records maintained by the Log Yard and reflects all scaled volumes sold at the Log Yard. The revenue of the Yard does not include the pulp logs harvested in the timber licenses and sold as direct sales to the harvesting contractors.

The Yard has developed a data control system that tracks the logs within the bins throughout the sales process. This allows the log yard to assign a value paid for each bin and develop a per meter rate for each sale.

Log Yard Sales Protocol

The Log Yard sells the sorted bins through sealed tenders. Sales are advertized in the regional papers one-week prior to the auction and to ensure strong bidding interest the Log Yard staff also faxes sales notices to interested parties. Bins for sale are identified in the yard by use of bright plastic tape and interested parties are encouraged to view the sorts.

Sales are arranged to occur every Thursday during the months of operation and sealed tenders must be delivered to the Vernon District Forest Service offices before 11:00 AM in order to be eligible. Faxed bids are not accepted. Ministry staff, in the presence of a witness, open the sealed tenders and bidding information is recorded on summary sheets.

Copies of the bid summaries are faxed to the Log Yard Manager for review and recording of the bidding particulars (i.e., bid price and winning bidders name). Once recorded and reviewed the Log Yard notifies the Vernon District staff that the bins are ready for pickup. Clerical staff then contact the successful bidder that the bin or bins are ready for delivery.

The Yard requires full payment for the logs before the bins can be transported. As a result of this payment policy the Yard has had no outstanding bad debts over the six years of its operation.

Net Revenue

The net revenue of the log yard as measured by gross revenue less stumpage paid and associated planning and development costs is developed below.

Log Yard Net Revenue 1996/97 – 1998/99

	1996/97	1997/98	1998/99
Total Sales Revenue	\$4,177,108	\$4,624,111	\$3,994,833
(less)			
Billed Stumpage Paid	\$1,396,875	\$1,610,268	\$1,726,507
Planning Cost Charges	\$391,606	\$465,419	\$457,794
Net Revenue	\$2,388,627	\$2,548,424	\$1,810,532

Project Profitability 1996/97 – 1998/99

The overall profitability of the Log Yard allowing for full cost recovery is developed below.

Log Yard Profitability 1996/97 – 1998/99

	1996/97	1997/98	1998/99
Harvested Volumes Scaled and Sold at the Log Yard (m ³)	55,207	58,124	57,720
Log Yard Operations Contracts/Costs	1996/97	1997/98	1998/99
Log Yard Operation Service Contract	\$381,103	\$406,085	\$358,222
Contract Safety Monitor	\$46,200	\$50,360	\$41,965
Contract Scalers (two to three scalers)	\$55,570	\$51,521	\$56,959
Contract Clerical + Other Support (i.e. bucking)	\$22,620	\$36,227	\$33,238
Log Yard Operational Expenses	\$47,003	\$29,565	\$31,754
Log Yard Lease	\$82,884	\$72,987	*\$50,000
Log Yard Advertising	\$23,591	\$21,547	\$16,789
Ministry Staff Costs	\$133,424	\$117,993	\$100,387
Subtotal Log Yard Operations Costs	\$792,395	\$786,285	\$689,314
Harvest Operations - Contracts			
Log Yard Harvest and Haul Contracts			
Vernon District	\$1,410,951	\$1,205,865	\$1,051,243
Penticton District	\$336,194	\$242,120	\$121,221
Salmon Arm District	\$0	\$166,178	\$326,640
Subtotal Harvest and Haul Contracts	\$1,747,145	\$1,614,163	\$1,499,104
Harvest Planing/Operations - Ministry			
TSL Planning/Administration Charges	\$391,606	\$465,419	\$457,794
Total Operational Costs	\$2,931,146	\$2,865,867	\$2,646,212
Stumpage			
Stumpage Paid	\$1,396,875	\$1,610,268	\$1,726,507
Total Costs :	\$4,328,021	\$4,476,135	\$4,322,719
Revenue from Operations:			
Log Yard Revenue	\$4,177,108	\$4,624,111	\$3,994,833
Net Profit/Loss	-\$150,913	\$147,976	-\$377,886

Notes* The lease payment for 1998/99 of \$50,000 was paid by Resource Temren Engineering Branch

The above profitability analysis indicates that the Log Yard over the three-year period 1996/97 to 1998/99 made a profit in only one of the three years examined. The total net loss for the last three years of operation is <\$380,823> (\$147,976 - \$528,799). A review of the unit costs and revenue are presented below.

Revenue Shortfall

Under the business-case analysis criteria the log yard lost \$380,823 in the last three years of operation. Over the same period the Log Yard paid stumpage to the Crown of approximately \$4.7 million.

Log Yard Unit Cost/Revenue Estimates 1996/97 – 1998/99

	1996/97	1997/98	1998/99
Harvested Volumes Scaled and Sold at the Log Yard (m ³)	55,207	58,124	57,720
Log Yard Operations Contracts/Costs	Unit Cost/Revenue per Cubic Meter Sold		
Log Yard Operation Service Contract	\$6.90	\$6.99	\$6.21
Contract Safety Monitor	\$0.84	\$0.87	\$0.73
Contract Scalers (two to three scalers)	\$1.01	\$0.89	\$0.99
Contract Clerical + Other Support (i.e. bucking)	\$0.41	\$0.62	\$0.58
Log Yard Operational Expenses	\$0.85	\$0.51	\$0.55
Log Yard Lease	\$1.50	\$1.26	*\$0.87
Log Yard Advertising	\$0.43	\$0.37	\$0.29
Ministry Staff Costs	\$2.42	\$2.03	\$1.74
Subtotal Log Yard Operations Costs	\$14.35	\$13.53	\$11.94
Harvest Operations – Contracts			
Log Yard Harvest and Haul Contracts			
Vernon District	\$25.56	\$20.75	\$18.21
Penticton District	\$6.09	\$4.17	\$2.10
Salmon Arm District	\$0.00	\$2.86	\$5.66
Subtotal Harvest and Haul Contracts**	\$31.65	\$27.77	\$25.97
Harvest Planning/Operations - Ministry			
TSL Planning/Administration Charges	\$7.09	\$8.01	\$7.93
Total Operational Costs	\$53.09	\$49.31	\$45.85
Stumpage			
Stumpage Paid	\$25.30	\$27.70	\$29.91
Total Costs :	\$78.40	\$77.01	\$75.76
Revenue from Operations:			
Log Yard Revenue	\$75.66	\$79.56	\$69.21
Net Profit/Loss	-\$2.73	\$2.55	-\$6.55

Notes * The lease payment for 1998/99 of \$50,000 was paid by Resource Tenures Engineering Branch

From the unit cost/revenue estimates above we can see that the yard reduced its operating costs over the period examined. On a unit cost basis, total operational costs (including the one time

lease payment deferment) declined by 14% from 1996/97 to 1998/99. The most significant cost savings were achieved in the harvest and haul and Log Yard Operation Service contracts.

The above data also indicates that the principal cause of the losses sustained in 1996/97 and 1998/99 was the lower average log price obtained for log sales in those years. If the average log price received in 1997/98 of \$79.56/m³ is compared to the total costs in the two years in which operating losses were sustained we see that the Yard would have earned a profit. This strongly suggests that the profitability of the Yard is driven by the quality profile and current market price of logs. This relationship is more fully developed in Table 4 below.

Table 4 presents the volume, total revenue, average log price and the contribution to total revenue for the six main sort categories over the period 1996/97 to 1998/99. From this data a clear pattern emerges that the total revenue generated by the Log Yard is closely related to the price of non-sawlog timber. With the exception of cedar the volumes the basic grade categories have remained relatively constant however the average price paid for non-sawlog categories has varied significantly. From the table below we can see that the price of peelers, oversize and cedar were significantly lower in the two years that the Yard incurred losses than in 1997/98 the year the Yard earned a profit.

Table 4
Revenue and Average Log Price Received for Principle Sorts 1996/97 – 1998/99

	Volume	Total Revenue	Average Log Price	Contribution to Revenue
1996/97				
Building Log	1,444	\$191,862	\$132.91	3%
Sawlog	32,656	\$2,094,995	\$64.15	50%
Peeler	12,885	\$1,222,898	\$94.91	29%
Oversized	4,251	\$424,691	\$99.89	10%
Other/Character	2,064	\$95,651	\$46.35	2%
Cedar	1,907	\$147,011	\$77.10	4%
Total	55,207	\$4,177,108	\$75.66	100%
1997/98				
Building Log	535	\$71,825	\$134.33	2%
Sawlog	36,255	\$2,351,253	\$64.85	51%
Peeler	10,944	\$1,033,035	\$94.40	22%
Oversized	2,830	\$321,845	\$113.72	7%
Other/Character	1,718	\$97,460	\$56.74	2%
Cedar	5,843	\$748,691	\$128.14	16%
Total	58,124	\$4,624,111	\$79.56	100%
1998/99				
Building Log	1,254	\$176,308	\$140.57	4%
Sawlog	30,041	\$1,737,662	\$57.84	43%
Peeler	12,138	\$944,994	\$77.85	24%
Oversized	4,297	\$352,249	\$81.98	9%
Other/Character	3,353	\$182,906	\$54.55	5%
Cedar	6,637	\$600,714	\$90.51	15%
Total	57,720	\$3,994,833	\$69.21	100%

The data indicates that the Log Yard, under its current cost structure, requires an average log price of between \$77/m³ and \$80/m³ in order to be profitable. When the average log price falls below \$77/m³ the Yard incurs losses. Therefore in periods of weak lumber markets in order to

earn a profit the Yard must concentrate on selling the higher end of the log profile. The implication of this is that to ensure its profitability the Log Yard must have the ability to in essence order its timber sales profile and not be required to sell the District Profile.

The data is clear, the greater the proportion of higher-grade logs in the profile sent to the Log Yard the greater the profitability of the Yard. This implies that sorting of lower grade logs unless it is able to find otherwise hidden value through its merchandizing (i.e., upgrading an oversized log to a building log through removal of butt flare etc.) is not profitable for the yard. The market does not appear to recognize additional value arising out of sorting, as evidenced by the relatively stable sawlog prices. This situation makes sense given the fact that the principle customers of the yard are Major licensees who already have scaling and sorting capabilities and therefore do not view Log Yard's provision of sorted as a significant cost savings.

Log Yards May not Be Suitable for Low Timber Value Regions

In regions where there is generally poor timber quality and limited number of buyers operation of a log yard is likely to face operating losses.

The requirement for a relatively high average log price has significant implications for the operation of other facilities throughout the Province:

- a log yard, selling a timber profile which is average or below average in quality, will find it difficult to remain in operation in other than strong lumber markets when the price of logs is high;
- operation of a log yard in regions where the timber quality is low will face significant operating losses; and,
- there must be a strong market with a large number of buyers present in order to foster active and competitive bidding for the logs to help maintain log prices.

The data also suggests that there may be little reason to believe that the introduction of a log yard into a region will necessarily stimulate economic development. The rationale for this is that the market/business for the most part does not view the service of providing sorted logs as a significant cost advantage. As such, unless there are additional advantages to locating in the region, such as access to transportation, presence of skilled labour, capital or tax benefits it is unlikely that entrepreneurs will place significant value on the presence of a log yard as a major locational advantage.

Current Cost Structure Leaves Little Potential for Economies of Scale

Under the current cost structure where over 90% of operational costs are based on a volume/meter sold basis there is little opportunity for improving profitability by increasing the volume sold through the Yard. If the proportion of variable costs were to be reduced there would be greater potential to obtain economies of scale.

Because fixed costs play a very small role in determining the profitability of the log yard, there is little room for economies of scale to be obtained. The proportion of fixed costs to total costs has ranged from 6.7% in 1996/97 to 4.9% in 1998/99. This relatively low fixed cost component suggests that the overall profit will not increase substantially as the volume sold increases and therefore little opportunity to take advantage of economies of scale.

The implication of the dominance of variable costs means that the profitability of the Yard is more closely linked to timber quality (i.e. number of highly valuable logs) and the price paid for each sort. There will be little or no gain in terms of profitability of directing more volume to the Yard unless that volume is made up of predominantly high value logs.

BUSINESS CASE HISTORICAL REVENUE/PROFITABILITY TRENDS

In order to obtain a better understanding of the long term financial viability of private log yard operations the following will examine the profitability of the Log Yard over the period 1993/94 to 1998/99. The analysis will be based on a business-case analysis where stumpage is viewed as a cost and will provide insights into the expected profitability of a private based operation over the period of a business cycle.

The financial data for the period 1993/94 to 1995/96 is derived from three sources:

- Price Waterhouse: Special Report on Harvesting Timber and Selling Logs (May 1995);
- Ministry of Forests: Vernon Log Yard Strategic Plan, (October 1996); and,
- Ministry of Forests Vernon District Log Yard sales records.

In addition to the above financial data, a planning cost estimate derived from Revenue Branch has been employed to account for a full cost recovery of the operations³. This planning cost estimate has been adjusted downward to recognize the scaling cost payments made by the Yard.

Profitability Analysis - Initial Years of Operation 1993/94 to 1995/96

A review of the profitability of the Log Yard operations, over the period 1993/94 to 1995/96, is presented below.

³ Revenue Branch Planning Cost estimates over the period 1993 – 1996 are as follows:

1993 = \$5.81/m³, 1994 = \$5.07/m³ and 1995 = 7.12/m³.

Log Yard Profitability 1993/94 to 1995/96

	1993/94	1994/95	1995/96
Harvested Volumes Scaled and Sold at the Log Yard	\$2,611	\$2,266	\$6,641
Log Yard Operations Costs			
Log Yard Operation Service Contract	\$460,794	\$487,315	\$559,837
Log Yard Overhead and Administration	\$49,126	\$39,729	\$43,425
Contract Supervisor	\$47,880	\$38,080	\$47,180
Log Yard Advertising	\$23,001	\$17,340	\$20,897
Log Yard Operations	\$580,801	\$582,464	\$671,339
Log Yard Harvest and Haul Contracts	\$1,534,195	\$1,417,247	\$1,563,845
Total Operational Costs	\$2,114,996	\$1,999,711	\$2,235,184
Planning/Admin Costs	\$250,378	\$196,260	\$326,433
Stumpage Paid	\$971,681	\$1,465,367	\$1,287,769
Total Costs :	\$3,337,055	\$3,661,338	\$3,849,386
Log Yard Revenue	\$5,172,045	\$5,783,517	\$5,192,855
Net Profit/Loss	\$1,834,990	\$2,122,179	\$1,343,469

From the analysis above we can see that the Log Yard generated strong revenue in all three years of operation totaling nearly \$5.3 million.

Log Yard Generated Strong Revenue Performance In Its First Three Years of Operation

The Log Yard made a profit in the first three years of operation, generating net revenue to the Crown of \$5.3 million.

A review of the volume-based unit costs and revenue are presented below.

Log Yard Unit Costs 1993/94 to 1995/96

	1993/94	1994/95	1995/96
Harvested Volumes Scaled and Sold at the Log Yard	\$2,611	\$2,266	\$6,641
Log Yard Operations Costs			
Log Yard Operation Service Contract	\$8.76	\$9.32	\$9.88
Log Yard Overhead and Administration	\$0.93	\$0.76	\$0.77
Contract Supervisor	\$0.91	\$0.73	\$0.83
Log Yard Advertising	\$0.44	\$0.33	\$0.37
Log Yard Operations	\$11.04	\$11.14	\$11.85
Log Yard Harvest and Haul Contracts	\$29.16	\$27.12	\$27.61
Total Operational Costs	\$40.20	\$38.26	\$39.46
Planning/Admin Costs	\$4.76	\$3.76	\$5.76
Stumpage Paid	\$18.47	\$28.04	\$22.74
Total Costs	\$63.43	\$70.05	\$67.96
Log Yard Revenue	\$98.31	\$110.66	\$91.68
Net Profit/Loss	\$34.88	\$40.60	\$23.72

The table above clearly shows that the remarkable profitability experienced in the first three years of operation arose out the strength of the average log price which averaged well over \$91 in all three years. In 1994/95 when profitability was the greatest, the average log price was nearly \$111/m³. The table also indicates that the costs of the operations, over the three-year period, experienced modest growth increasing by 7% and averaged \$67.16/m³.

Profitability Analysis - 1993/94 to 1998/99

This section will develop a review of the financial profitability of the Log Yard over the period 1993/94 to 1998/99. Table 6 below presents the Log Yard's unit operational cost, harvest and haul planning cost charges, stumpage, and total revenue over the period 1993/94 to 1998/99.

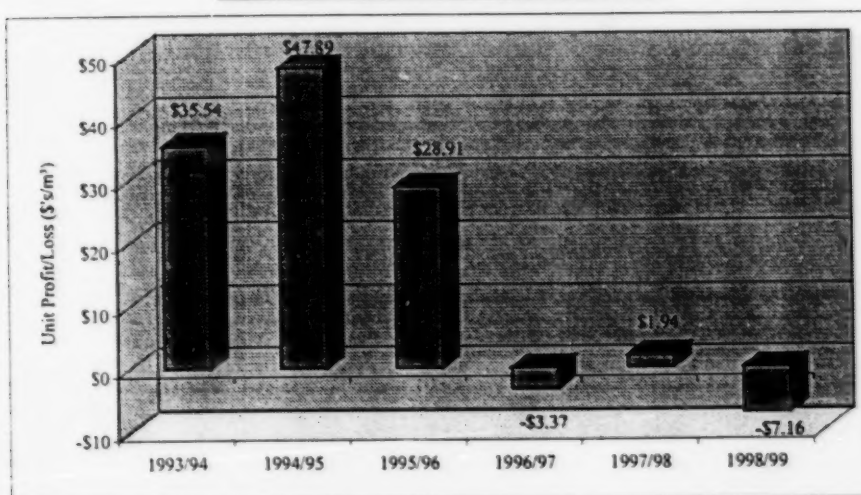
Table 6
Log Yard Total Cost, Average Log Price and Profitability 1993/94 to 1998/99

Operational Factors	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
Volume (m ³)	53,162	52,427	57,506	55,207	58,124	57,720
Total Yard Operations (\$'s/m ³)	\$11.04	\$11.14	\$11.85	\$14.35	\$13.53	\$11.94
Harvest and Haul (\$'s/m ³)	\$29.16	\$27.12	\$27.61	\$31.65	\$27.77	\$25.97
Planning (\$'s/m ³)	\$4.71	\$3.74	\$5.68	\$7.09	\$8.01	\$7.93
Stumpage (\$'s/m ³)	\$18.28	\$27.95	\$22.39	\$25.30	\$27.70	\$29.91
Total Cost (\$'s/m³)	\$63.43	\$70.05	\$67.96	\$78.39	\$77.01	\$75.76
Log Yard Revenue (\$'s/m³)	\$98.31	\$110.66	\$91.68	\$75.66	\$79.56	\$69.21
Profit/Loss (\$'s/m³)	\$34.88	\$40.60	\$23.72	-\$2.73	\$2.55	-\$6.55
Breakeven Log Price 1993 - 1998	\$72.24/m ³					
Breakeven Log Price 1996 - 1998	\$77.03/m ³					

A number of key features arise in the data presented in Table 6 above:

- The Log Yard over the life of the operation (1993/94 to 1998/99) generated positive returns to the Crown producing a total net return to the Crown of \$4,920,344;
- Nearly 98% of the total profit was generated in the first three years of operation;
- The Yard generated a profit in four of its six years of operation;
- The average breakeven price for logs over the six year life of the Yard was \$72.24/m³;
- The breakeven price of logs is increasing, rising from \$67.16/m³ over the period 1993/94 to 1995/96 to \$77.03 over the period 1996/97 to 1998/99; and,
- A clear temporal break in terms of profitability arises in 1996/97.

Figure 9
Historical Profitability 1993/94 to 1998/99



The increase in the average breakeven log price has arisen out of a number of factors including the introduction of the SoftWood Lumber Agreement and the Forest Practices Code. These factors impacted on demand for incremental wood as well as stumpage and planning costs.

The data also indicates the Log Yard has controlled its operating and harvest and haul costs, experiencing modest increases over its six years of operation. Significant improvements to operational costs were achieved in the transfer of operations from the original site in Lumby to their current location in Coldstream.

There are growing indications that the Softwood Lumber Agreement (SLA) has to a certain extent dampened the Major Licensee's demand for incremental wood. The Major Licensees as a result of their AAC cut requirements, and the quota for duty free lumber, require less timber volume to be secured from outside sources. The impact of this lower demand is felt in the prices that the Log Yard receives for its sawlog timber. The weak demand has meant that the price of sawlogs has not kept pace with a number of the other costs the operation has been facing, reducing its overall profit margins.

The data found in Table 6 clearly indicates that in order to be profitable, (under its current cost structure), the Yard must have an average log price of around \$78/m³. When the average log price falls below this level operating losses occur. The impacts of SLA are making it more and more difficult to achieve these kinds of rates with a large component of sawlogs in the sales profile of the Yard.

Average Log Price Must be Over \$78/m³ to be Profitable

The data indicates that a Log Yard must on average receive \$78/m³ in order to make a profit. Current market conditions arising out of the Softwood Lumber Agreement and world lumber prices are working against a return to prices in the \$80/m³ to \$90/m³ range as experienced in the early 1990's.

The analysis also indicates that it is critical that the average log price must be high in order to make a profit. A log yard can only improve its overall profitability in two ways, the first is to improve the quality of the log by effective merchandizing and the second is ensure that only the highest grade timber is brought in to be sorted. The close relationship between profitability and log quality has important implications for development of further log yards supported by volumes from the Small Business Program.

SECTION 3 - GOVERNMENT OPERATIONS REVIEW

This section reviews the Log Yard on the basis of a government operation where stumpage fees will not be viewed as a cost of securing the rights to sell harvested timber but as a flow-through of revenue to the Crown. A further modification to the planning costs charges has also been adopted to allow for recognition of the direct labour, and contract costs of the planning function without including the basic overhead for depreciation, heat, light, power building leases or other administration costs.

Vernon District planning cost estimates were developed by District staff (see Appendix A) and indicate that over the three-year period 1996/97 to 1998/99 the costs of planning averaged \$4.48/m³. This average District planning cost rate will be applied across all three years.

The government operations analysis of profitability are developed below:

Government Operations - Log Yard Profitability 1996/97 - 1998/99

	1996/97	1997/98	1998/99
Harvested Volumes Scaled and Sold at the Log Yard	55,207	58,124	57,720
Log Yard Operations Costs			
	1996/97	1997/98	1998/99
Log Yard Operation Service Contract	\$381,103	\$406,085	\$358,222
Contract Safety Monitor	\$46,200	\$50,360	\$41,965
Contract Scalers (two to three scalers)	\$55,570	\$51,521	\$56,959
Contract Clerical + Other Support (i.e. bucking)	\$22,620	\$36,227	\$33,238
Log Yard Operational Expenses	\$47,003	\$29,565	\$31,754
Log Yard Lease	\$82,884	\$72,987	*\$50,000
Log Yard Advertising	\$23,591	\$21,547	\$16,789
Ministry Staff Costs	\$133,424	\$117,992	\$100,386
Subtotal Log Yard Operations	\$792,396	\$786,284	\$689,313
Log Yard Harvest and Haul Contracts			
Vernon District	\$1,410,951	\$1,205,865	\$1,051,243
Penticton District	\$336,194	\$242,120	\$121,221
Salmon Arm District	\$0	\$166,178	\$326,640
Subtotal Harvest and Haul Contracts	\$1,747,145	\$1,614,163	\$1,499,104
TSL Planning/Administration Charges	\$247,327	\$260,394	\$258,586
Total Costs :	\$2,786,868	\$2,660,841	\$2,447,003
Crown Revenue			
Log Yard Sales Revenue	\$2,780,233	\$3,013,843	\$2,268,326
Stumpage**	\$1,396,875	\$1,610,268	\$1,726,507
Net Revenue	\$4,177,108	\$4,624,111	\$3,994,833
Net Profit	\$1,390,240	\$1,963,270	\$1,547,830

Notes * The lease payment for 1998/99 of \$50,000 was paid by Resource Tenures Engineering Branch.

** Discussions with Revenue Branch indicates that the stumpage payable is paid from the gross receipts of the operation of the Log Yard in account AT \$1102 RG20 and therefore is not incremental to the revenue earned from Yard sales revenue.

Based on a government operations analysis where stumpage is viewed as a revenue-flow-through, the Log Yard is seen to make a profit in all three years.⁴ To avoid double accounting of the stumpage paid, the gross value of the sales revenue of the Yard was adjusted to account for the payment of stumpage from the general account of the Log Yard. Discussions with Revenue Branch indicate that the gross revenue from the Yard's sales is used to pay the stumpage billed against the timber sales of the Yard. Therefore, the gross revenue reflects the overall return to the Crown from the operation of the Yard and is not incremental to stumpage.

Over the three-year period the Yard is estimated to have generated revenue to the Crown totaling \$4,901,340. From the profitability analysis above we can see that in only 1997/98 did the operation of the Yard generate Crown revenue in excess of the stumpage billed. In aggregate, over the period 1996/97 to 1998/99 sales revenue from the Log Yard operations generated \$167,690 (\$4,901,340 - \$4,733,650) over the value the Crown could have received had the same volume been sold at the upset rate without bonus bid.⁵

Log Yard Incremental Revenue

Over the three year period 1996/97 to 1998/99 the Log Yard operations generated \$62,422 in Crown revenue over those levels that would have been received had the sales been sold at upset without a bonus bid.

A review of the volume-based unit costs and revenue are presented below.

⁴ The government based analysis, where stumpage is viewed as a revenue flow through, assumes that the opportunity cost of the Log Yard timber sales is zero and that these volumes could not be sold in any other fashion and are therefore represents purely incremental revenue to the Crown.

⁵ Log Yard sales do not include pulpwood, which is disposed of through direct sales and not charged to the Log Yard account.

Government Operations - Log Yard Unit Cost/Revenue Estimates 1996/97 - 1998/99

	1996/97	1997/98	1998/99
Harvested Volumes Scaled and Sold at the Log Yard	55,207	58,124	57,720
Log Yard Operations Costs			
	1996/97	1997/98	1998/99
Log Yard Operation Service Contract	\$6.90	\$6.99	\$6.21
Contract Safety Monitor	\$0.84	\$0.87	\$0.73
Contract Scales (two to three scales)	\$1.01	\$0.89	\$0.99
Contract Clerical + Other Support (i.e. bucking)	\$0.41	\$0.62	\$0.58
Log Yard Operational Expenses	\$0.85	\$0.51	\$0.55
Log Yard Lease	\$1.50	\$1.26	\$0.87
Log Yard Advertising	\$0.43	\$0.37	\$0.29
Ministry Staff Costs	\$2.42	\$2.03	\$1.74
Subtotal Log Yard Operations	\$14.35	\$13.53	\$11.94
Log Yard Harvest and Haul Contracts			
Vernon District	\$25.56	\$20.75	\$18.21
Penticton District	\$6.09	\$4.17	\$2.10
Salmon Arm District	\$0.00	\$2.86	\$5.66
Subtotal Harvest and Haul Contracts	\$31.65	\$27.77	\$25.97
TSL Planning/Administration Charges	\$4.48	\$4.48	\$4.48
Total Costs :	\$50.48	\$45.78	\$42.39
Crown Revenue			
Net Log Yard Sales Revenue	\$50.36	\$51.85	\$39.30
Stumpage Paid	\$25.30	\$27.70	\$29.91
Total Revenue	\$75.66	\$79.56	\$69.21
Net Profit/Loss	\$25.18	\$33.78	\$26.82

Comparison with Competitive Bid Sales

Although the above analysis examined the government based net return to the Crown arising out of the operations of the Log Yard it did not review an estimate of the opportunity cost of the sales. The opportunity cost represents the foregone revenue that could have been made if that same volume had been sold in the next best alternative method.

Table 5 below develops an estimate of the opportunity cost of the Yard over the period 1996/97 - 1998/99. An estimate of the annual average billed rate paid by Section 20 was developed by volume weighting the billed rates in each of the Districts supplying logs to the Yard by its relative share of the total Log Yard sales volume. This volume-weighted billed rate was then multiplied by the Log Yard volume sold in each year to develop the revenue that would have been paid to the Crown had the volume been sold as Section 20 competitive sales. A planning cost charge \$4.48/m³ was also applied to allow for the total all in return to the Crown.

The billed rate is a blended rate, made up of the bonus and upset paid on the coniferous sawlog component of the scaled volume along with the \$0.25/m³ paid on grades 3, 4, 5, and 6. Given

that the Log Yard sells only small volumes of pulp/firewood the average blended Section 20 rate can be viewed as a conservative estimate of the foregone revenue.

Table 5
Estimate of the Opportunity Costs of Log Yard Sales 1996/97 – 1998/99

	1996/97	1997/98	1998/99
Log Yard Volume Sold (m ³)	55,207	58,124	57,720
Vernon District Average Section 20 Billed Rate (\$'s/m ³)	\$38.25	\$29.41	\$29.18
Salmon Arm District Average Section 20 Billed Rate (\$'s/m ³)	\$32.47	\$40.05	\$31.35
Penticton District Average Section 20 Billed Rate (\$'s/m ³)	\$62.76	\$52.49	\$53.04
Average Section 20 Billed Rate (\$'s/m ³)	\$45.36	\$33.96	\$31.19
Planning Costs (\$'s/m ³)	\$4.48	\$4.48	\$4.48
Net Section 20 Return to the Crown (\$'s/m ³)	\$40.88	\$29.48	\$26.71
Net Log Yard Return to the Crown (\$'s/m ³)	\$25.18	\$33.78	\$26.82
Estimated Section 20 Net Revenue (\$'s)	\$2,256,742	\$1,713,744	\$1,541,632
Log Yard Net Revenue (\$'s)	\$1,390,112	\$1,963,429	\$1,548,050
Foregone Revenue *	\$866,630	-\$249,685	-\$6,418

Note* The negative number indicates that the sale of the volume through the Log Yard would have generated greater net Crown revenue than tendering the volume as Section 20 sales.

From Table 5 we see that had the equivalent volume been sold as Section 20 competitive sales the Crown would have secured a greater overall net revenue of \$610,527 (\$866,630 – \$256,103) over the three year period 1996/97 to 1998/99. Interestingly, the table also indicates that in two of the three years 1997/98 and 1998/99 the Log Yard sales generated greater revenue than would have been made if the equivalent volume had been tendered as Section 20 sales.

Opportunity Cost of Log Yard Sales

The foregone revenue over the past three years of not tendering the Log Yard timber sales as Section 20 sales is estimated to be \$610,527.

SECTION 4 - REVIEW OF LOG YARD PERFORMANCE - 1996 STRATEGIC PLAN OBJECTIVES

The 1996 Strategic Plan objectives, approved by the Regional Manager, are:

1. Maximizing net financial return to the Crown from the forest Resource by sorting and selling logs;
2. Providing open market purchases of logs available for the primary and secondary manufacturing industries within the province;
3. Providing opportunity for small operator tenure holders to market logs through a government log sort yard facility;
4. Providing an opportunity to collect information related to logging costs for alternative silviculture systems for determining appraisal allowances and to collect information related to selling a variety of log grades through a variety of market cycles that may lead to development of forest service policy;
5. Providing an opportunity for participation in the forest industry by First Nations; and
6. Harvesting a profile of stands equal to the district SBFEP - many of which will be through alternative silviculture systems. Adaptive or alternative forest harvesting practices will be promoted and implemented but situations, such as forest health issues, may preclude these practices.

The Log Yard Has Substantially Met its Strategic Objectives

The Log Yard over the period 1996/97 to 1998/99 achieved five of its six stated strategic objectives.

Objective 1 – Maximize Financial Return to the Crown:

The Log Yard did not fully achieve objective 1. The opportunity cost estimates based on the government operation analysis indicate that had the equivalent volume been sold and harvested as Section 20 competitive sales the Crown would have received over \$610,000 more in terms of net revenue. However under the government operation analysis the Log Yard did generate stumpage and other revenues. From a business-case analysis perspective objective was also not achieved. Over the three-year period 1996/97 to 1998/99 the Yard incurred \$380,823 in business losses.

Objective 2 – Provide Open Market Sales of Logs:

The Log Yard was able to fully achieve objective 2. Log Yard sales records clearly indicate a wide customer base. Sales to Major tenure holders has also increased by 6% over the three-year period.

Objective 3 – Provide a venue for small tenure holders to sell/market logs:

Objective 3 was achieved. The Log Yard has undertaken to sell small quantities of logs from Wood Lot holders and salvage operators, although this represents a small portion of total sales.

The current regulations make it difficult for the Yard to undertake large volumes of brokered sales due to the difficulties in obtaining full cost recovery directly to the Yard.

Objective 4 – Develop harvest cost and log price information:

Objective 4 has been partially achieved. The Yard has successfully collected data on harvest and haul contracts along with log prices however little use has been made with the data. The cost and price data obtained over the past three years has not been analyzed for trends or disseminated within the Ministry on a regular basis.

Objective 5 – Provide opportunities for First Nations to participate in the forest industry:

Objective 5 has been fully achieved. A number of harvest and haul contracts have been awarded to the Okanagan Indian Band (OIB). The experience gained through these contracts have allowed the OIB to build a solid base of experienced workers.

Objective 6 – Harvest the profile of the District:

Objective 6 has been achieved. District staff indicate that Log Yard sales are considered just part of the overall five year development plan. Allocation of timber sales is generally based on consideration of the tenure term and forest health concerns. Timber sales with longer terms are generally constructed out of blocks with better fibre characteristics to allow them to remain operational over the life of their tenure. Log Yard sales are given the next priority and blocks to be included in the sales can be based on market timing and specific client order requirements.

Conclusion:

The Log Yard over the last three years of operation has substantially achieved 5 of the 6 strategic goals. The operation of the Log Yard has also provided a number of social and community benefits that the District has enumerated. These social benefits include improved client service, First Nations capacity building, enhanced forest management and financial savings.

SECTION 5 - RECOMMENDATIONS

This final section is divided into two components, the first will develop a basic analytical package of indicators that will assist Executive in reviewing future log yard proposals. The second component will provide a series of operational recommendations that will assist the Log Yard to address current operational issues and meet future challenges.

Critical Log Yard Development Factors

The business-case analysis identified a number of critical factors that dramatically impact on the overall profitability of a log yard. The following represent the principal business characteristics that appear to be critical success factors. These factors are divided into three principal categories market, operations, and profitability.

Market

The analysis indicates that there is a need for a well-developed customer base within a relatively moderate trucking distance to the Yard. The size of the market catchment is determined by the average quality of the logs the yard sells. The greater the proportion of higher quality logs the larger is the catchment area since trucking becomes a smaller proportion of the total cost of the timber.

Without the presence of a substantial customer base there is a potential for lower demand for the product, which could reduce the overall prices paid for the timber. This is particularly the case when the profile of the log yard is weighted towards sawlogs and lower value timber.

In continuing weak lumber markets the Yard must clearly focus on the sale of higher quality timber to avoid the problems of selling into a commodity product base (i.e., sawlogs). This suggests that the Yard also must have skilled personnel (scalers and buckers) able to merchandize the logs in order to realize the inherent values of the timber.

Our analysis also indicates that development of log yards may not act as a dynamic economic development catalyst. The data indicates that for a yard structured to sell the average profile of the area (i.e., a significant portion of sawlogs) there is little willingness on the part of its customers to pay for sorting the timber. Therefore unless the Yard is able to significantly improve the quality of timber through its merchandizing of the logs the margins received for the timber will not be sufficient to cover its costs.

Any future log yard proposal should clearly illustrate its understanding of its potential customer base and how the yard, through its sales profile, will be able to meet the needs of its potential customers. The analysis should detail the key customers timber needs and how the operation of the yard will be able to supply them.

Operations

It is likely that any private sector operation that is operated by other than a Major licensee may require access to timber supplied through the Small Business Forest Enterprise Program. The volumes could potentially come from any of the Program's apportionments.

Any log yard proposal should in its proforma balance sheet recognize the trade off between fixed and variable costs and the potential for economies of scale. The greater the proportion of variable costs the lower the overall opportunity to gain advantages of economies of scale. This is because operations costs will vary directly with the volume of logs processed through the yard.

Any proposal must indicate clearly how they will be able to monitor and control operations costs. Given the trend towards lower log prices we are now seeing in the market, operational costs are a significant factor that must be closely monitored. Without this cost monitoring capability there is little if any way that the yard will be able to track the relationships between the number of sorts offered and their contribution to the profitability of the operation.

The Vernon Yard clearly shows that there is a need for a strong experienced management team with an understanding of the trends in the market. Moreover the data suggests that there is a strong relationship between the quality of the staff service and the number of return clients. This is particularly the case in development of the smaller volume clients, who have the potential to feel overwhelmed by the process.

Profitability

Our analysis indicates that any new log yard operation, if it is structured along similar lines to the Vernon log yard will require an average log price of over \$77/m³ in order to breakeven.

Profitability of any log yard is closely related to the quality of its fibre. The yard therefore should focus on processing only higher value logs. The Vernon operational experience indicates that pulp must not be brought into the facility and should be trucked directly to a chipping facility in order to reduce handling costs. Any additional handling of lower grade timber only adds to costs and reduces the overall profitability.

The number of sorts offered must be carefully monitored to ensure that the volumes and the margins remain sufficient to cover the incremental cost of each sort. Our analysis indicates that for the most part clients are unwilling to pay a significant premium for sorted logs unless they are of the highest quality. This suggests that there are minimal cost savings that accrue to the purchase of sorted sawlogs.

FINANCIAL CONTROL AND TRACKING

The recommendations made in the 1995 Price Waterhouse report on financial control and tracking were:

“ Appropriate data collection systems need to be set up to accurately track all projects costs”

“The record keeping and accounting systems should be set up to accumulate data in a format which is consistent with the analysis and reporting objectives of the MOF.”

Recommendations

1. Project accounting should be set up within the district office as a distinct and separate entity so that all costs associated with the log yard are readily identifiable and retrievable. This

accounting should address indirect costs of the log yard such as planning, pre-harvest costs and administrative costs incurred in the three districts.

2. A summary report should be completed for each fiscal year for the log yard that includes all costs as well as stumpage paid and revenue earned.
3. The objectives of the log yard should be reviewed, revised if appropriate, and confirmed by the ADM, Operations.
4. The log yard should explore the potential for cost recovery when operating as a broker. The administrative charge for selling logs on behalf of licensees such as woodlot holders should be recovered rather than gross revenue to the consolidated revenue fund.
5. Improved dissemination of Log Yard sales and price data. Although the sales data is recorded there is little if any use made of this information. A summary report of findings should be produced and made available on at least an annual basis if not more frequently.
6. Sorting costs should be analyzed to develop average costs that can be used to evaluate the revenue cost ratio of any given sort. Through this type of analysis Yard management will be able to readily determine each sort's contribution to the Yard's revenue.
7. Evaluation of proposals for additional log yards should be done on the basis of the objectives proposed. If revenue is an objective, senior management must decide the basis on which that would be calculated – e.g. stumpage incurred as a flow through or not. If revenue generation is not an objective, then a cost benefit analysis, including social objectives, needs to be clearly articulated.

Appendix A

Vernon District Staff - Planning Cost Estimate

Estimation of Pre-Award planning costs for Log Yard sales.

Sales including salvage that went into the Log Yard over the past three years over the period 1996/97, to 1998/99 were estimated to have a total volume of 110,911m³.

Cost estimates were based on the following:

Rece and Layout; estimates were taken from the report on *Evaluation of Alternative Silviculture Systems within the Special Log Sales Projects* which was completed by Bancroft and Zielke. The cost sheet is attached.

Cruising costs were estimated to be \$100.00 per hectare and based on a district average of 300m³ per hectare, the costs are with administration etc., about \$.50 per m³. In the case of partial cut, where we are removing only 50% of the volume in the 1st. pass, then the cruising costs will increase to about \$1.00 per m³. This may be viewed as an upper bound estimate and the costs are likely a third less.

Forest service pre-award costs for planning and administration are often difficult to quantify but even at a cost of \$1.50 per m³, this is again a fairly generous estimate. This would include cost of F.S preliminary plans, recess, Silviculture Prescription field trips, Silviculture prescription write-up, appraisal cost determination, tender package compilation etc.

Based on these estimates, the following table should indicate what the costs of pre-award are as sorted by the various Silviculture harvesting systems.

Silviculture System	Layout Cost	Cruising Costs	Administration costs	Total
Clearcut	\$1.00/m ³	\$0.50/m ³	\$1.50/m ³	\$3.00/m ³
Clearcut with reserves	\$1.15/m ³	\$0.55/m ³	\$1.50/m ³	\$3.20/m ³
Small Scale salvage	\$1.00/m ³	\$0.25/m ³	\$1.50/m ³	\$2.75/m ³
Shelterwood	\$3.10/m ³	\$1.00/m ³	\$1.50/m ³	\$5.60/m ³
Group Selection	\$5.00/m ³	\$1.00/m ³	\$1.50/m ³	\$7.50/m ³
Seed Tree	\$1.20/m ³	\$0.60/m ³	\$1.50/m ³	\$3.30/m ³
Single tree selection	\$6.50/m ³	\$1.00/m ³	\$1.50/m ³	\$9.00/m ³

In order to calculate the average pre-award cost per hectare for all L.Y. sales over the last three years, I first determined the volume percent of each for each silviculture system then prorated the cost per m³. The results are as follows.

Silviculture System	Volume Harvested	percent of total	Cost per m ³	percent * Cost per m ³
Clearcut	43,831m ³	40%	\$3.00/m ³	\$1.20/m ³
Clearcut with reserves	7,200m ³	6.5%	\$3.20/m ³	\$0.21/m ³
Small Scale salvage	15,490m ³	14%	\$2.75/m ³	\$0.40/m ³
Shelterwood	22,822m ³	20%	\$5.60/m ³	\$1.12/m ³
Group Selection	9,768m ³	9%	\$7.50/m ³	\$0.70/m ³
Seed Tree	2,844m ³	3%	\$3.30/m ³	\$0.10/m ³
Single tree selection	8,956m ³	8%	\$9.00/m ³	\$0.75/m ³
			Total	\$4.48/m³

The total calculated cost of pre-award planning for Log Yard timber over the past three years is **\$4.48/m³**.

Brian Bedard - SBFEP Planner.